

Title (en)  
Hybrid brake assembly.

Title (de)  
Hybrid-Bremsverband.

Title (fr)  
Assemblage hybride pour freins.

Publication  
**EP 0664413 A1 19950726 (EN)**

Application  
**EP 94630070 A 19941215**

Priority  
US 18512494 A 19940124

Abstract (en)  
A hybrid brake assembly (10) is provided with both a resin-bonded metallic friction pad element (26) and a resin-bonded non-asbestos, non-metallic friction pad element (28) and hydraulic cylinder/piston elements (20) for simultaneously actuating both friction pad elements in a vehicular braking operation. <IMAGE>

IPC 1-7  
**F16D 69/02**

IPC 8 full level  
**B60T 1/06** (2006.01); **C09K 3/14** (2006.01); **F16D 69/02** (2006.01); **F16D 69/00** (2006.01)

CPC (source: EP KR US)  
**F16D 55/226** (2013.01 - KR); **F16D 69/02** (2013.01 - EP US); **F16D 69/025** (2013.01 - EP US); **F16D 69/026** (2013.01 - EP KR US);  
**F16D 69/028** (2013.01 - KR); **F16D 2069/002** (2013.01 - EP KR US)

Citation (search report)

- [Y] AU 547217 A
- [YDX] US 3856120 A 19741224 - KWOLEK J, et al
- [Y] EP 0319380 A1 19890607 - ELF FRANCE [FR]
- [XY] EP 0540826 A1 19930512 - RUETGERS PAGID AG [DE]
- [XY] US 4051097 A 19770927 - ALDRICH FRANCIS WILLIAM
- [XY] EP 0035463 A1 19810909 - GOODYEAR AEROSPACE CORP [US]
- [XY] EP 0418756 A2 19910327 - SUMITOMO ELECTRIC INDUSTRIES [JP]
- [X] EP 0208326 A2 19870114 - SUMITOMO ELECTRIC INDUSTRIES [JP]

Designated contracting state (EPC)  
DE ES FR GB IT SE

DOCDB simple family (publication)  
**EP 0664413 A1 19950726; EP 0664413 B1 20000315**; AU 682070 B2 19970918; AU 8027594 A 19950803; BR 9405193 A 19951017; CA 2140477 A1 19950725; CA 2140477 C 20000404; CN 1076804 C 20011226; CN 1109830 A 19951011; CO 4230043 A1 19951019; DE 69423461 D1 20000420; DE 69423461 T2 20000720; ES 2144040 T3 20000601; JP 2779911 B2 19980723; JP H07208521 A 19950811; KR 950023874 A 19950818; US 5509511 A 19960423

DOCDB simple family (application)  
**EP 94630070 A 19941215**; AU 8027594 A 19941207; BR 9405193 A 19941221; CA 2140477 A 19950118; CN 94112899 A 19941209; CO 94057020 A 19941216; DE 69423461 T 19941215; ES 94630070 T 19941215; JP 33106794 A 19941208; KR 19940032539 A 19941202; US 18512494 A 19940124